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PUGET SOUND ACTION TEAM
OFFICE OF THE GOVERNOR

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Municipal Stormwater NPDES Phase I Comment
Washington Department of Ecology
Water Quality Program
P.O. Box 47696
Olympia, Washington 98504-7696

Dear Colleagues:

Thank you for all of your good work on the “Draft Phase I Municipal Stormwater NPDES and State Waste Discharge General Permit.” I am submitting these comments as director of the Puget Sound Action Team staff rather than as the chair of the multi-agency Puget Sound Action Team partnership.

Stormwater runoff is one of the leading causes of water pollution in urban areas of Puget Sound. The Governor’s Salmon Recovery Office and the Puget Sound Salmon Recovery plan have both cited stormwater as one of the factors limiting recovery of salmonids listed as threatened under the Endangered Species Act. Recently, NOAA Fisheries scientists have undertaken studies to determine the causes of pre-spawn coho salmon mortality in Seattle urban creeks. Scientists have drawn correlations between rainfall events and high percentages of mortality; mortality rates are also much higher in urban than in rural creeks. These initial findings suggest that stormwater may be a significant cause of high percentages of pre-spawn mortality.

NOAA Fisheries scientists have also studied the adverse effects of copper on the olfactory systems of juvenile coho salmon and have found that “short-term influxes of copper to surface waters may interfere with olfactory-mediated behaviors that are critical for the survival and migratory success of wild salmonids.” Copper is commonly found in stormwater discharges. Stormwater is also believed to be recontaminating restored sediments in the Thea Foss Waterway.

Given the magnitude and seriousness of these and other problems caused by stormwater in the basin, this permit is critical in our region’s ability to mitigate harm from stormwater.

In general, we support the current draft of the permit. We especially support provisions that require the use of the thresholds, minimum requirements, flow control and treatment standards,

use of forested as the pre-developed condition, and best management practices of the 2005 *Stormwater Management Manual for Western Washington* for all new development and redevelopment projects. The manual is a key component of our region's toolbox to protect water resources from the adverse effects of stormwater runoff.

We do have several concerns regarding the draft permit. Specifically, we are concerned that:

1. Monitoring provisions are inadequate to provide us with information needed to make more informed decisions about the effects of stormwater on aquatic systems and the relative effectiveness of management actions.
2. Minimum performance measures for retrofitting structural stormwater controls are inadequate and may result in existing stormwater facilities continuing to contribute significant pollutant loadings to the Sound.
3. The timelines for program development and implementation throughout the permit are too long and will hinder our ability to protect and restore the Sound.

We have described these concerns more fully below.

Our most fundamental question about this draft permit is this: *Will this current draft permit move us forward sufficiently to be able to achieve the Governor's goal of a healthy and thriving Puget Sound by 2020?* I hope that as you work towards a final version of the permit, you have this question squarely in mind.

The Puget Sound Partnership, established by the Governor to set out an agenda to reach a healthy Puget Sound by 2020, has been briefed on and has discussed some of the impacts to Puget Sound from toxics and other chemicals, and from stormwater, and has had some discussion about the current regulatory structure for managing stormwater in the Puget Sound basin. We anticipate that stormwater will be an area where the Partnership sets out specific outcomes for 2020, along with measures and benchmarks. I hope that in finalizing and issuing these permits, the Department is anticipating the work of the Partnership and keeping the 2020 goal in the forefront of your analysis.

Attached you will find more detailed comments from our agency. Again, thank you for your work on this important issue and the opportunity to comment on the preliminary draft permit. If you have questions on these comments, please contact Bruce Wulkan, the PSAT Program Manager for stormwater and combined sewer overflows, at (360) 725-5455 or at bwulkan@psat.wa.gov.

Sincerely,



Brad Ack
Director

**Puget Sound Action Team
Detailed Comments on the Municipal Stormwater NPDES Phase I
Submitted by the Puget Sound Action Team**

The following specific comments are divided into three parts: Areas of concern, suggestions for improvement, and areas of support.

Areas of concern

- Monitoring - The limited scope of the monitoring required (S8) does not appear to adequately support Puget Sound Partnership goals of protecting and restoring Puget Sound by 2020. Improvements to Puget Sound habitat and water quality by 2020 will require substantial advances during this permit timeframe (through 2011) in our understanding of stormwater harms and their specific sources in the Puget Sound basin, and improved efforts to reduce the harms. Stormwater appears to be responsible for recontaminating sediments in Puget Sound's urban bays, may be contributing to increases in concentrations of some PAHs in deep areas of Puget Sound, and appears to be affecting spawning coho returning to Puget Sound's urban streams. We suggest expanding the breadth of the monitoring requirements to include: (1) more comprehensive evaluations of the effectiveness of stormwater management programs in S8.B and (2) a new section that investigates the degree to which stormwater discharges are impacting receiving waters and sediments. If these are not appropriate for jurisdictions throughout the state, we support the inclusion of Puget Sound-specific special conditions in a new section (S10).

Coordination of monitoring programs will be critical to success of this permit program. S8.D includes only the opportunity for collaboration; we feel the final permit should require some type of coordination among the permittees. This would increase the efficiency and effectiveness of permittee and state monitoring efforts. Action Team staff plan to work with Ecology staff and others to try to develop an approach to collaborative monitoring of municipal stormwater in the Puget Sound basin. In the event that effort fails to produce a tangible program, the final permit should include language requiring permittees in the Puget Sound basin to work with Ecology and their fellow permittees to address complementary issues in the types of monitoring they undertake under S8.A through C.

The permit should clearly articulate the objectives and purposes for the different types of monitoring required in S8. Given the acknowledged limitations of the monitoring specified, the introduction to S8 on page 36 of the draft permit should be revised to include clear objectives (to be consistent with the fact sheet). For example, S8 might be revised to read: "Permittees will ultimately be responsible for implementing comprehensive long-term monitoring programs. To comply with this permit, permittees shall develop and implement a monitoring program that includes three elements...." Purposes and general approaches might be stated as: "Stormwater monitoring is intended to characterize stormwater runoff quantity and quality at a limited number of locations in a manner that allows analysis of changes in conditions over time and generalization

across the permittees' jurisdictions. Stormwater program effectiveness monitoring is intended to improve stormwater management efforts by evaluating at least two issues that significantly affect the success of or confidence in stormwater controls. BMP evaluation monitoring is intended to evaluate the effectiveness and operation and maintenance requirements of ... BMPs by characterizing effluent characteristics and pollutant removal for at least two treatment BMPs and by characterizing effectiveness of at least one flow reduction strategy."

The reporting provisions of the permit (S8-F) should be revised to require permittees to convey to Ecology relevant results of stormwater monitoring. The purpose and approach for stormwater monitoring suggested above refer to analysis of changes over time and generalization across the landscape. QAPPs (S8.D.2) should describe how these analyses and generalizations would be accomplished, and reports (S8.F.1) should present the results of these analyses and generalizations; specifically: What changes over time have been observed; and what flows and pollutant loadings and concentrations are projected to occur from various land uses/land covers throughout the permittees' systems?

We support the requirements for stormwater monitoring outlined in S8A.1 and 2. However, we have a few concerns and questions. Relatively recent information about copper toxicity to the olfactory systems of fish and observations of pre-spawn mortality in returning coho salmon suggest that stormwater toxicity may not be best evaluated by the acute daphnid tests specified in S8.A2c. Additional specification of the sediment monitoring may be required – should samples encompass particles in transit during the first flush? Should multiple samples be required to characterize variability and/or differences between wet and dry seasons?

Finally, we suggest that Ecology allow flexibility in monitoring based on information already collected by the jurisdiction (i.e., Ecology could limit the list of parameters required based on detections from prior valid monitoring efforts, adjust land use categories to more locally relevant classifications, or allow use of alternative toxicity testing depending on local concerns). Such changes could be conveyed in the QAPPs and require approval by Ecology.

- Addressing discharges from existing development

We are concerned that the current permit will lead to only marginal improvements in management of discharges from existing lands, and will not adequately support Puget Sound Partnership goals of protecting and significantly restoring the Sound by 2020. It is our understanding that development in the Sound prior to the 1990s, unless retrofitted, typically provides little, if any, stormwater treatment prior to discharge to Puget Sound and its tributaries. Much of the development within jurisdictions covered by this permit falls within this category. Significant effort is needed to systematically identify, prioritize and bring up to today's standards stormwater facilities that are polluting the Sound. We are therefore concerned that one of the two key permit provisions related to existing discharges contains no minimum standards. S5-6 Structural Stormwater Controls requires no minimum standards for number of facilities upgraded, percentage of prioritized

projects undertaken, or pollutant loads reduced during the permit cycle. We question how the permit will “make reasonable progress in addressing existing sources of water quality impairment” (one objective for the permit as stated in the fact sheet). One option would be to require identification of inadequate systems, prioritization of discharges suspected or known to be impairing water quality and beneficial uses, and completion of a percentage of those projects (perhaps 10%).

- Timelines in permit

We are concerned that the relatively long timelines in the permit will not support Puget Sound Partnership goals of recovering the Sound by 2020. This is not a new permit but rather a reissued permit from 1995 yet the timelines would appear to treat permittees as though they were just developing programs and had never been required before by permit to carry out a stormwater management program. Jurisdictions covered by this permit have been working on the majority of these program areas for many years (King County, for example, began developing its program in the 1980s). We question why required program activities provide the permittees with an additional 1 or 2 years (and longer) out of a 5-year permit to carry out activities they already should be doing under their present permit.

Specifically, we question the following long timelines:

- 18 months to carry out a process of permits, plan review, inspections and enforcement (page 9, line 34).
- 18 months to develop a structural stormwater control program (page 11, line 18).
- 12 months to adopt a source control ordinance (page 12, line 27).
- 24 months to train staff responsible for source control (page 14, line 23).
- 24 months to developing a training program for staff responsible for illicit discharge detection (page 16, line 22).
- 12 months to develop maintenance standards (page 18, line 15).
- 4 years to develop an inspection schedule for maintaining facilities (page 19, line 5).
- 2 years to develop a program to inspect permanent facilities in new residential projects (page 19, line 13).
- 2 years to develop a program to inspect permanent facilities, other than catch basins, owned by the municipality (page 19, line 32).
- 12 months to develop and carry out public education activities.

Suggestions for improvement

- Compliance with standards S4: We recommend reinserting language (that was in the preliminary draft) stating that if site-specific conditions warrant additional controls to protect beneficial uses, additional controls shall be implemented. This seems only a prudent measure; we do not understand why it has been taken out of this draft.
- Public involvement and participation S5-4: We recommend expanding this very cursory section, and broadening language under this permit provision to recognize that citizen involvement is far broader than just participating in an advisory role in decision making (page 8, line 8). Public involvement also includes participating in the protection and

restoration of species, habitat, and water quality. Activities such as Stream Team and Beach Watchers not only educate the public, as shown under S5-10 Education and Outreach, they involve the public and ultimately, help reduce pollution related to stormwater runoff. Action Team staff would be pleased to provide additional language.

- Source control S5-7: We recommend adding language stating that permittees shall use non-toxic alternatives to chemical pesticides and vegetation management at municipally owned and operated parks, for other landscaping on municipal lands, and as part of roadside vegetation management. Chemical pesticides pollute waterways and there are many alternatives to the traditional use of chemical pesticides, herbicides and fungicides – permittees should use these safer techniques whenever practical.
- Source control S5-7: We notice that language has been changed from the preliminary draft so that all multi-family, commercial, industrial and government sites will no longer be inspected during the permit term. Relying on estimates and inspection only of “legitimate complaints” will probably capture most of the pollution-generating sites, but it may result in many pollution-generating sites not being inspected, and not coming into compliance. We recommend reinserting language that all multi-family, commercial, industrial and government sites will be inspected at least once during the permit term. We also recommend inserting language that all owner/operators of these sites will receive information describing how pollution should be controlled on the site.
- Structural Stormwater Controls S5-6: We recommend adding language to allow the use of “Natural Drainage System”-type projects for street and neighborhood redesign projects to reduce volume and provide treatment. Seattle Public Utilities’ Natural Drainage Systems projects are excellent, nationally award-winning examples of structural stormwater controls that have resulted in significant improvements in stormwater management. We should encourage these as well as commercial redesign projects.
- Public education and outreach S5-10: We recommend adding language that states that the SWMP “shall include communication to the community regarding the permittee’s program and specific program activities.” Communicating how the municipality is using public funds to protect water quality is an effective method for ensuring that the public will continue to support the program. We also recommend adding a new sub-element, or adding language to an existing sub-element, regarding the need for proper vehicle maintenance, fixing oil leaks, driving less, and other practices to reduce pollution from cars and trucks. Vehicles are a leading contributor of metals and petroleum products to state waters.
- Reporting S9, line 38: We recommend expanding this element so that the municipality reports on “known improvements or degradation to water quality, fish and wildlife habitat, and other beneficial uses.”

Areas of support

- Minimum standards – We strongly support use of the 2005 *Stormwater Management Manual for Western Washington* as the technical standard for stormwater control, particularly the flow control standard and use of the forested condition (or prairie if historical records indicate that was the native vegetation prior to European settlement) as the pre-developed condition. We believe this stringent flow control standard for new development and redevelopment is necessary to protect stream channels and in-stream habitat needed by salmon and other wildlife. The *Regional Nearshore and Marine Aspects of Salmon Recovery in Puget Sound*, delivered to Shared Strategy for Puget Sound for inclusion in the regional salmon recovery plan, cites stormwater discharges as having adverse effects on salmon and bull trout populations listed as threatened under the Endangered Species Act (page 4-27 table 4-4; page 4-36 table 4-6). The chapter recommends using existing regulatory protection programs to maintain functions and water quality for threatened species and, as needed, refine the programs (page 7-8 table 7.1). Stronger stormwater management standards, particularly for flow control and treatment, are needed to protect and recover these species.
- Timeline for adopting minimum standards - We support the proposed timeline for permittees to adopt the minimum requirements of Appendix 1 within 12 months, since this is a reissuance of an existing permit. We also support the department's review and approval of local (alternative) stormwater manuals and ordinances.
- Allowing use of LID – We support provisions requiring permittees to allow for the use of low impact development practices (page 9, line 7). Low impact development practices offer a new set of tools and practices to help our region better manage stormwater.
- Coordination – We support coordination measures among permittees, co-permittees and secondary permittees (page 7, line 20), and urge the department to extend this coordination to monitoring programs.
- Maintenance standards – We support requiring that maintenance standards be developed that are at least as stringent as those found in the 2005 Stormwater Management Manual for Western Washington (S5-9 Operation and Maintenance).